



Word Formation of New Terms in Adobe Photoshop Program: Implication for the Teaching English Vocabulary

Ahmad Takhfif^{1*}, Rohmani Nur Indah², Galuh Nur Rohmah²

¹Magister Program of English Language Teaching, Institut Agama Islam Kediri
Jalan Sunan Ampel 7 Kediri, Indonesia

²Universitas Islam Negeri Maulana Malik Ibrahim Malang
Jalan Gajayan 50 Malang, Indonesia

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*Corresponding Author:

takhfifahmad@gmail.com

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Abstract: The development of technology may impact educational field. Research on technology and language learning shows that technology may provide some opportunities for students to get an easy access in information, integrated learning, and easy way to practice what they learn. The language created in the computer program can be used as a communication tool for its application, including in teaching English. Nowadays, using computer can support language learning. Regarding this point, this study aims to analyze new terms found in Adobe Photoshop Program. Further, the researchers also described morphological processes of the new terms in Adobe Photoshop program in teaching English vocabulary. While, the design of this research is descriptive qualitative design. The result shows compound and derived words can be classified as new terms in Adobe Photoshop CS4. Related to teaching vocabulary, the results show that teaching English vocabulary through word formation found in new terms in Adobe Photoshop Program may give an impact on students' vocabulary development.



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INTRODUCTION

The development of computer programs creates a new language that is more modern and easier to use. The language used in computer programs can be regarded as a communication tool for its application. The use of computers begins at a very young age. Almost all Net Gen students use computers by the time they are 16 to 18 years old (Twenge et al., 2018). In other words, the computer is one of the media tools in communication that makes people appreciate more information and knowledge. In addition, the language used in computer programs is one of the phenomena that language students must

consider to increase their knowledge of the language. This phenomenon can be analyzed because it is related to the linguistic field. One of the linguistic fields that study the formation of new words is morphology. Morphology is the study of word formation, including how new words are created in various languages of the world (Lieber, 2009, (Libben & Jarema, 2010). The process of creating new words in several ways is called word formation. The word formation process is how new words are created (Plag, 2018). When people mention new words, they create word formations at the same time. In its development, there is a process of word formation in this phenomenon. New

terms in computer programming can be found in the Adobe Photoshop Program. Adobe Photoshop is a computer program that focuses on raster graphics editors published by Adobe Systems and is devoted to image editing and effect creation (Caruso & Postel, 2002).

The word formation process as the concern of this study can be related to language learning. As mentioned above, this process of word formation or morphology can be studied to help language learners to enrich their vocabulary. The theory of word formation is the key to increasing new vocabulary (Enesi, 2017). This field of language study is critical to study because it can be related to the content of the language itself. Morphological awareness helps increase students' vocabulary and recognize their meaning easily by looking at the affixes attached to words (Giyatmi, 2017). Knowing how to form words can help them understand the language, primarily to enrich or maximize their vocabulary. In this case, it is English vocabulary. Teaching morphology has a significant influence on student performance, teaching morphology plays a vital role in increasing students' awareness of morphology and vocabulary knowledge.

Referring to this case, several previous studies have proven that there is a close relationship between word formation and its implications for teaching English vocabulary. Vocabulary research also explains the positive impact of vocabulary teaching through word formation strategies on Iranian EFL students' vocabulary learning (Sadeghi et al., 2011). Meanwhile, other studies also clarify that learning derivational suffixes is proven to be effective in increasing students' vocabulary (Al-Muthmainnah & Ohoiwutun, 2014). It shows that the increase in students' vocabulary can be influenced by learning derivational suffixes. Equally important, previous

research that explained teaching technical vocabulary through word formation rules, revealed that most students did not know the rules of word formation before learning (Mahraj, 2018). The findings of

this study indicate that students who received instruction on the word formation process performed better than those who did not receive any instruction.

The researchers realized that there are similarities and differences in the research above. In previous studies, the researchers discussed the same field, namely the process of word formation and its impact on vocabulary teaching. Meanwhile, the difference lies in the focus of the topic, namely derivational suffixes and word formation rules. Therefore, the researchers focused on word formation from new terms in computer programs and its implementation in teaching English vocabulary.

To understand English vocabulary, it is necessary to understand the morphological process, morphological analysis techniques are effective for teaching vocabulary (Eviyuliwati et al., 2019). Regarding to the previous finding on morphological analysis for teaching vocabulary (Eviyuliwati et al., 2019), the researchers further focused on the types of word formation process found in the new terms in Adobe Photoshop CS4 Program. Furthermore, it concerns to how the teaching vocabulary through word formation can be applied. As the implication of this study, it is expected that the teaching of English vocabulary is inseparable from the perspective of morphology. Through understanding word formation found in new terms in Adobe Photoshop Program, English learners can also learn how to acquire more vocabulary of technological terms.

THEORETICAL SUPPORT

Morphology

Language consists of function and form. It can be interpreted as a means of communication. Morphology is about word-structure, how do words like "dislike" consist of the smaller meaningful elements dis- and like. As can be seen in the definition, this branch of linguistics studies the structure of words. In addition to understanding the structure of words, morphology also studies the elements that give meaning to a word. In other words, the primary function of language is to help people communicate. As for the form, language consists of sounds, gestures, or other physical variations. Therefore, language learning can vary. Morphology is the study of word formation, including the way new words are created in the world's languages, and how words are formed varies depending on how they are used in sentences (Lieber, 2009). It is the study of how words are arranged and how they are put together from smaller parts.

Word formation

Word formation is the study of words, dealing with the construction of rules of formation of words in a particular language, which in linguistics is the study of the rules of word construction. Word formation refers to all processes related to changes in word form such as affixation which is a morphological problem. The classification of word formation has seven different processes: compounding, mixing, borrowing, coining, clipping, backformation, multiple processes, and others (Yule, 2019).

In word formation, there are terms namely compounding and derivation. Compounding is the process of forming a new word that is not of a particle bound but of two or more words that stand alone. Compounding is the joining of two words to form a new word (Plag, 2018). The derivation process can be achieved

through a large number of small bits of English. These small bits are referred to as "affixes" and this process is called derivation, for example: Unhappy. Some affixes are usually added at the beginning of a word, these are called prefixes. Some affixes are usually also added at the end of words, they are called Suffixes (Yule, 2019).

Teaching vocabulary

In learning English, the fundamental element that needs to be considered is vocabulary. Vocabulary is one of the elements of language that has an essential role in communication both in spoken and written form. All words in a language are referred to as vocabulary to achieve language skills (listening, speaking, reading, and writing). Vocabulary learning is an important part of learning foreign languages because the meaning of new words is often emphasized, both in books and in class (Alqahtani, 2015). In teaching vocabulary, there are several vital aspects; word form, word meaning, and word use. In other words, teaching vocabulary should include the main features of lexical items and their relation to other words.

Considering the importance of vocabulary mastery, to emphasize that lexical knowledge is central to communicative competence and second language mastery (Hendrawaty & Retnomurti, 2021). It also explains the correlation between vocabulary knowledge and complementary language practice: Vocabulary skills enable language use and vice versa. The use of language leads to an increase in vocabulary knowledge (Twenge et al., 2018).

METHOD

The method used in this research is descriptive qualitative design. Qualitative research is the process of investigating how people understand social or human

problems and form meaning from them (Creswell, 2007). The descriptive method is a method that tries to explain the symptoms related to the current situation and tries to provide direct facts to the current problem and variables that the researchers do not manipulate. The researcher used Adobe Photoshop CS4 Program as the research instrument of this research. Further, the library research is also used to strengthen the research finding and discussion especially in term if the implication of word formation in teaching vocabulary.

Data collection is done through several stages. First, the researchers collected data from the program preview. Second, the researchers find and write data consisting of new terms. To search for new terms, researchers used the Oxford and Longman dictionaries. In addition, Oxford and Longman dictionaries are used to decide whether the word is new or not. By looking at the two dictionaries used, the researchers can determine whether the term is new or not. Finally, the researchers classified the data into two categories; compounding and derivation.

After collecting data from Adobe Photoshop CS4, the researchers had several steps to analyze the data. First, the researchers categorized the data according to the type of word formation process, namely compounding and derivation. Second, they analyzed the compounding and derivation words found in new terms in Adobe Photoshop CS4. Third, they discussed and interpreted the data from each category into the word formation process. Finally, they discussed all the data based on the theory of the word formation process to get answers to the research questions.

RESULT AND DISCUSSION

This present study attempts to answer the following questions: What are the types of word formation process found

in the new terms in Adobe Photoshop CS4 Program and how the teaching Vocabulary through Word Formation rules. Based on the finding, the researchers found nine new terms in the Adobe Photoshop program; *bicubic*, *despeckle*, *zoomify*, *spherize*, *pointillize*, *vibrance*, *photomerge*, *picasize*, and *mezzotint*. The nine new terms have a word formation process. These terms are discussed by analyzing the words one by one conferring to the research method so that they can be classified into two categories, namely compounding and derivation. The new words can be seen in the following table.

Table 1. Word formation of the new terms in Adobe Photoshop program

Compounding	Derivation
Photomerge, Picasize, Mezzotint	Bicubic, Despeckle, Zoomify, Spherize, Pointillize, Vibrance

Figure 1. New word formation in Adobe Photoshop

Based on the table, three new words are classified in the compounding process: *photomerge*, *picasize*, and *mezzotint*. Meanwhile, in the derivation process, there are six new words, including *bicubic*, *despeckle*, *zoomify*, *spherize*, *pointillize*, and *vibrance*.

The researchers found six new terms included in derived words and three compound words in line with the findings above. The words newly created from existing ones by affixation process, non-affixation, and compounding. The new words were not listed in the Oxford and Longman dictionaries, so the researchers classified them as new terms.

One of the new terms that are categorized as derived words is "bicubic". The term "bicubic " is formed from the root word " cube " which is added to the prefix bi- and the suffix -ic. In terms of use in programs, this term has the meaning to create two cube shapes. This

process is called the affixation process, affixation as a bound morpheme bound to a base (Plag, 2018). This shows that this term produces a new contextual meaning in its use in the Adobe Photoshop program.

Furthermore, the researchers also categorized and analyzed the term "Photomerge" into compound words. Compounding is a word that consists of two elements, the first is a root, word, or phrase, the second is a root or word (Plag, 2018). The new term was formed by combining the words " photo " and " merge ". This combination of nouns and verbs can be classified as a verbal compound. After the two words are combined, it produces a different class of words that become verbs. It also creates a new contextual meaning of combining multiple images into a single file.

Referring to these findings and discussions, to indicate how the teaching vocabulary through word formation process, the process of word formation cannot be separated from various aspects of language including vocabulary. Understanding the process of word formation in new terms in the field of technology will directly impact increasing the awareness of English learners on the morphological competence of vocabulary in the computer field (Giyatmi, 2017). The process of forming a new word in the field of technology is an important part of teaching vocabulary, such as variations of root words, the structure of adjectives and adverbs form, and the addition of prefixes and suffixes including compound and derived word. Learning the word formation belongs to a strategy that becomes significant for students because it will enable them to acquire vocabulary more easily (Hendrawaty & Retnomurti, 2021).

The word formation is the key to improving learning new vocabulary words in a vocabulary. A language teacher needs to recognize that in the practice of

learning English vocabulary, word formation theory is the key to increasing new vocabulary (Enesi, 2017). Vocabulary learning has a critical role. One of the important strategies for learning vocabulary is word building strategy or called word formation strategy. In another study, it was also stated that vocabulary learning through word formation strategies had a positive effect on the vocabulary learning outcomes of students at SMPN 20 Bekasi (Suezdi, 2017). It shows a significant effect of vocabulary learning through word formation strategies on vocabulary learning outcomes. Besides, increasing the interest of learning vocabulary through the convenient and pleasant way is also a significant point to emphasize (Munawaroh et al., 2017).

A term using new words that we can associate with one of the branches of linguistics from the morphological aspect, namely the process of word formation. In the process of word formation, there are several basic processes of forming new words such as derivation, prefix, and suffix, etc. Basic knowledge of using affixes will usually help students learn English vocabulary faster and avoid the need to repeatedly search for words (Kim, 2013). Teaching students use parts of words to determine the meaning of words in the text. This strategy can be beneficial for students' vocabulary development.

The present study does have some limitations that should be taken into consideration for further research. For the further researchers who are interested in doing the research in the same area which is linguistics study especially word formation, it is required to conduct research in a broaden area such as syntactical analysis.

CONCLUSION

In brief, teaching language can be integrated with the use of technology in a classroom. Teachers can implement

computer program to teach language both language skills and language itself. In this paper, it suggests that using Adobe Photoshop as a computer program can be assisted to help teachers to teach vocabulary. New terms found in Adobe Photoshop can be classified as morphology, which is called word formation process. The importance of understanding word formation theory for teaching English vocabulary is how a word is formed from several processes. Word formation is an integral part of the vocabulary teaching process, such as variation of root words, structure of adjectives and adverbs, and addition of prefixes and suffixes.

From the results of this study, researchers who want to conduct morphological research, it is better to examine other computer programs because there are still many new terms in technology that have not been studied. For English teachers, it is important to integrate technology especially computers in their classrooms. It is also essential to have a brief overview of how to assess student outcomes regarding the use of technology in their classrooms.

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